

Appl. No. : 10/773,390
Filed : February 6, 2004

IN THE CLAIMS:

1. (Canceled)

2. (New)

A method of mixing fluid comprising:

isolating a fluid to be mixed in a container;

providing a mixing structure comprising a shaft extending along an axis, a support mounted to said shaft for rotation therewith, a number of vanes mounted for rotation with said support and extending outwardly from said support, said vanes having an inner edge and an outer edge, said vanes having a first end and a second end, a first portion of each of said vanes at said first ends thereof positioned closer to said axis than a second portion of said vanes at said second ends thereof, said vanes spaced apart from one another and defining openings there between through which fluid may flow, said vanes at said second ends thereof positioned closer to one another than said vanes at said first ends thereof;

positioning said structure in said container containing fluid to be mixed; and

rotating said mixing structure within said fluid within said container, drawing said fluid into said mixing structure, moving said fluid towards said inner edges of said vanes at said first portions thereof, shearing said fluid as it impacts said inner edges of said vanes and passes through said opening between said vanes, and trapping undispersed materials if present within said fluid at said second portions of said vanes within said mixing structure.

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3. (New)

The method of mixing in accordance with Claim 2 including the step of spacing at least a portion of at least two adjacent vanes about 0.3 inches apart at their second ends.

4. (New)

The method of mixing in accordance with Claim 2 wherein said vanes are curved between their inner and outer edges.

5. (New)

The method of mixing in accordance with Claim 2 wherein said first and second ends of said vanes are arranged in a generally circular configuration.

6. (New)

The method in accordance with Claim 2 wherein said undispersed materials comprise semi-solid globules of said fluid.

7. (New)

The method in accordance with Claim 2 wherein said openings between said vanes are curved.

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8. (New)

A method of mixing fluid comprising:
isolating a fluid to be mixed in a container;
positioning a mixing structure in said container containing fluid to be mixed;
rotating said mixing structure in said container about an axis;
drawing fluid into an interior area of said mixing structure;
expelling fluid towards a first portion of vanes of said mixing structure, said first portion of said vanes positioned outwardly of said axis about which said mixing structure is rotated, said fluid being sheared as it impacts said first portion of said vanes and being expelled through openings between said vanes; and
trapping undispersed materials if present in said fluid at a second portion of said vanes which are positioned closer to said axis than said first portion of said vanes.

9. (New)

The method of mixing in accordance with Claim 8 wherein said vanes have a first end and a second end and said first portion of each of said vanes is located at said first end of each of said vanes and said second portion of each of said vanes is located at said second end of each of said vanes.

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10. (New)

The method of mixing in accordance with Claim 8 including the step of expelling said fluid through curved openings between said vanes.

11. (New)

The method of mixing in accordance with Claim 8 wherein said vanes are positioned closer to one another at said second portions thereof than at said first portions thereof.

12. (New)

The method in accordance with Claim 8 including the step of removing said mixing structure having undispersed trapped materials from said container.

13. (New)

The method in accordance with Claim 8 wherein said fluid comprises paint and said container comprises a paint can.

14. (New)

The method in accordance with Claim 8 wherein said second portions of said vanes are connected to said support.

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15. (New)

The method in accordance with Claim 14 wherein said support is plate-like in configuration.

16. (New)

The method in accordance with Claim 8 wherein said vanes have a top end and a bottom end and an inner edge and an outer edge, said inner edges of said vanes at said top ends being positioned closer to said axis than said inner edges of said vanes at said bottom ends.